



Sustainable Aviation Fuel

Grand Challenge

Sustainable Aviation Fuel Grand Challenge: October 2021–September 2024 Progress Report



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The U.S. Department of Energy (DOE), U.S. Department of Transportation's (DOT) Federal Aviation Administration (FAA), and the U.S. Department of Agriculture (USDA) have released the Sustainable Aviation Fuel (SAF) Grand Challenge 2021 - 2024 Progress Report to the Sustainable Aviation Fuel (SAF) Grand Challenge Roadmap.

In line with the Biden-Harris administration climate goals and the U.S. aviation industry's commitment to net-zero greenhouse gas (GHG) emissions by 2050, the SAF Grand Challenge established the following goals to ensure low-GHG emitting aviation fuels:

- A minimum of a 50% reduction in life cycle GHG emissions compared to conventional fuel.
- 3 billion gallons per year of domestic SAF production by 2030.
- 35 billion gallons of SAF per year to satisfy 100% of domestic demand by 2050.

Progress Made Toward SAF Grand Challenge Goals

DOE, DOT, and USDA and other federal agencies, including the U.S. Department of Defense, U.S. Environmental Protection Agency, and National Aeronautics and Space Administration have made important progress on accelerating acceptance and growth of SAF as a primary strategy in aviation decarbonization.

The progress made by these federal agencies occurs when they release new funding opportunities and

initiatives aligned with the SAF Grand Challenge Roadmap; provide expertise and technical assistance to industry; increase interagency collaboration; and provide analytical support to decision makers.

Since the SAF Grand Challenge launch in September 2021, the SAF Interagency Working Group¹ (<https://biomassboard.gov/sustainable-aviation-fuel-interagency-working-group>) has:

- Published the SAF Grand Challenge Roadmap² (<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-roadmap>) to establish a coordinated effort of support through six action areas toward the achievement of 2030 and 2050 goals.
- Identified current agency actions aligned with the SAF Grand Challenge Roadmap, as well as gaps and barriers to achieving the SAF Grand Challenge goals through publication of the SAF Grand Challenge Roadmap Implementation Framework.³ (<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-implementation-framework>)

¹<https://biomassboard.gov/sustainable-aviation-fuel-interagency-working-group>

²<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-roadmap>

³<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-implementation-framework>

- Coordinated federal agency information exchange and stakeholder engagement to understand industry developments.
- Performed collaborative interagency research, development, demonstration, and deployment (RDD&D) aligned with the SAF Grand Challenge Roadmap action areas.
- Developed the SAF Grand Challenge October 2021 – September 2024 Progress Report⁴ (<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-progress>) along with tracking metrics and dashboard.

Four Key Metrics Developed to Track Progress

To track progress on achieving the SAF Grand Challenge 2030 and 2050 goals, the federal interagency team has developed the following four metrics:

 <p>Estimated Total U.S. SAF Production</p>	 <p>Estimated Life Cycle CO₂ Equivalent Reductions Achieved With U.S. SAF Production and Use</p>
 <p>Planned U.S. Production Potential of SAF</p>	 <p>Applicable Research, Development, Demonstration, and Deployment Projects</p>

Based on data points from the above metrics, a metrics dashboard⁴ (<https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-progress>) was developed to show the outputs over time and will be updated annually. ⚡

From feedstock innovation and conversion technologies to building supply chains, policy and valuation analysis, and enabling end use, the focus of the SAF Grand Challenge and the work of the federal agencies are making strides on the road to a decarbonized aviation sector.

Download the Sustainable Aviation Fuel Grand Challenge: October 2021–September 2024 Progress Report.⁴




⁴ <https://biomassboard.gov/sustainable-aviation-fuel-grand-challenge-progress>

